

REMARKS

In the Office Action dated March 22, 2004, claims 22-29 and 32 were rejected under 35 U.S.C. § 112, ¶ 2; claims 1-7, 9, 21-25, 28, 29, and 31-33, were rejected under 35 U.S.C. § 102 over U.S. Patent No. 5,754,543 (Seid); claims 8, 30, and 34 were rejected under § 103 over Seid in view of RFC 791, "Internet Protocol DARPA Internet Program Protocol Specification"; claims 10-13 and 16-19 were rejected under § 103 over Seid in view of U.S. Patent No. 6,400,681 (Bertin); and claim 20 was rejected under § 103 over Seid in view of Bertin and RFC 791.

Applicant acknowledges the indication that claims 14, 15, 26, and 27 would be allowable if informalities were addressed.

Claim 26 has been amended from dependent form to independent form, with the scope of claim 26 remaining *unchanged* (except for replacing the term "media" with "medium" at line 3 to address a grammatical error and replacing "between each of" with "among" at line 6 to improve clarity). The changes to claim 26 do not change the scope of the claim. As indicated by the Office Action, claim 26 is now in condition for allowance.

REJECTION UNDER 35 U.S.C. § 112, ¶ 2

Claims 22, 23, 25-30, and 32 have been amended to replace "processor" with "controller" to make the claims consistent with what is recited in corresponding independent claims 21 and 31. The change from "processor" to "controller" broadens the scope of each of the dependent claims. Withdrawal of the § 112 rejection is respectfully requested.

REJECTIONS UNDER 35 U.S.C. §§ 102 AND 103

It is respectfully submitted that Seid does not teach the subject matter of claim 1. Claim 1 recites the act of combining a first data structure *with itself* to determine a cost of transmitting data. The Office Action identified the connectivity matrix described in Seid as being the first data structure of claim 1. An example of the connectivity matrix (CM) described in Seid is depicted in column 6, at lines 36-44. The Office Action pointed to the passage at column 4, lines 37-40, as providing proof that the connectivity matrix (CM) of Seid is combined with itself. Applicant respectfully disagrees. The column 4,

lines 37-40, passage of Seid describes a "generally additive operator" that has the properties described in lines 41-46 of column 4. The cited passage of Seid refers to a data structure A that is a range of values associated with a cost function C. Later in the column 4 passage, Seid describes that the newly introduced generally additive operator satisfies the standard addition operator, +, as well as other operators such as the minimum, maximum, and Boolean functions. However, column 4 of Seid does not describe the combining of a data structure containing costs with itself to determine the cost of transmitting data.

The use of the generally additive operator is shown in column 5 of Seid, which describes the creation of data structures to indicate priorities between different cost functions. Nowhere in the column 5 passage is there any discussion that the cost functions are combined with themselves. In column 6, Seid describes that, after a priority criterion has been established, the connectivity matrix is established with ordered pairs that correspond to the priority established by the criterion. Seid, 6:28-32. Seid also describes the application of Floyd's Algorithm to the connectivity matrix (CM) to generate a shortest path matrix. Seid, 6:49-63. However, Seid provides no discussion of combining the connectivity matrix (CM) with itself to determine a cost of transmitting data.

The Office Action indicated that the "examiner assumes a reasonable but broad interpretation of combining [sic] a first data structure with itself." 3/22/2004 Office Action at 3. However, Applicant notes that adopting a reasonable but broad interpretation of a claim term is not the same as ignoring a claim term. Claim 1 specifically recites combining the first data structure with itself. A fair reading of Seid would indicate that there is no teaching whatsoever in Seid that any of the data structures described in Seid are combined with themselves. Therefore, it is respectfully submitted that claim 1 is not anticipated by Seid.

Independent claim 10 was rejected as being obvious over the asserted combination of Seid and Bertin. A minor amendment has been made to claim 10 at line 11 to improve form—the scope of claim 10 remains unchanged. Bertin was relied upon by the Office Action as teaching a storage device and a controller, but the Office Action indicated that Seid teaches the remaining elements of claim 10 as explained with respect

to the rejections of claims 1 and 2. Applicant respectfully submits that even if Seid and Bertin can be properly combined, the hypothetical combination of Seid and Bertin does not teach or suggest *all* elements of claim 10. As discussed above, Seid clearly provides no suggestion or teaching of combining a data structure with itself to determine a cost for transmitting a data packet. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 10.

Independent claim 21 is also allowable over Seid. Claim 21 recites representing costs of transmitting a data packet among a plurality of nodes in a second matrix, where the second matrix contains elements expressed as *exponents* representing distances between corresponding pairs of nodes. Representing costs as exponents was originally recited in claim 24 (now cancelled). In the rejection of claim 24, the Office Action stated "see similar rejection for claim 12". 3/22/2004 Office Action at 3. The rejection of claim 12 cites column 6, lines 35-60, of Seid. The cited passage refers to the connectivity matrix and a shortest distance matrix. However, there is absolutely no indication whatsoever in the cited passage, or anywhere else in Seid, of a second matrix that contains elements expressed as exponents representing distances between corresponding pairs of nodes.

Therefore, claim 21 is not anticipated by Seid.

Independent claim 31 recites storing a cost matrix expressing transmission costs as exponents. A minor amendment was made to claim 31 at line 2 to improve form—the scope of claim 31 remains unchanged. As discussed above, Seid provides no teaching whatsoever of storing a cost matrix that expresses transmission cost as exponents.

Independent claim 33 recites determining a transmission cost of transmitting a data packet to a destination entity using a cost matrix to iteratively determine a minimum distance between any pair of routers in one hop up to N hops, where N is two or greater. The routers described in Seid do not perform such a determining task. Therefore, claim 33 is not anticipated by Seid.

Dependent claims, including newly added dependent claims 35-40, are allowable over the cited references for at least the same reasons as corresponding independent claims.

Dependent claims 8, 30, and 34 were rejected as being obvious over Seid and RFC 791. In view of the improper application of Seid to corresponding base claims 1, 21, and 33, it is respectfully submitted that the obviousness rejection is defective. Dependent claim 20 was rejected as being obvious over Seid, Bertin, and RFC 791. However, in view of the improper application of Seid and Bertin to base claim 10, it is respectfully submitted that the obviousness rejection of claim 20 is also defective.

In view of the foregoing, allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (NRT.0068US).

Respectfully submitted,



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